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STAT

X

STAT

NPIC 3601

9 May 63 5500-9703-63

3155-1020-6000

3155-1020-6000

1

Develope a linear Phasolver system
in accordance with ltr CF 63/307 1
with ltr CF 63/307 dated 11 April
1963 and proposal ES 20793

ILLEGIB

SOURCE:

STAT

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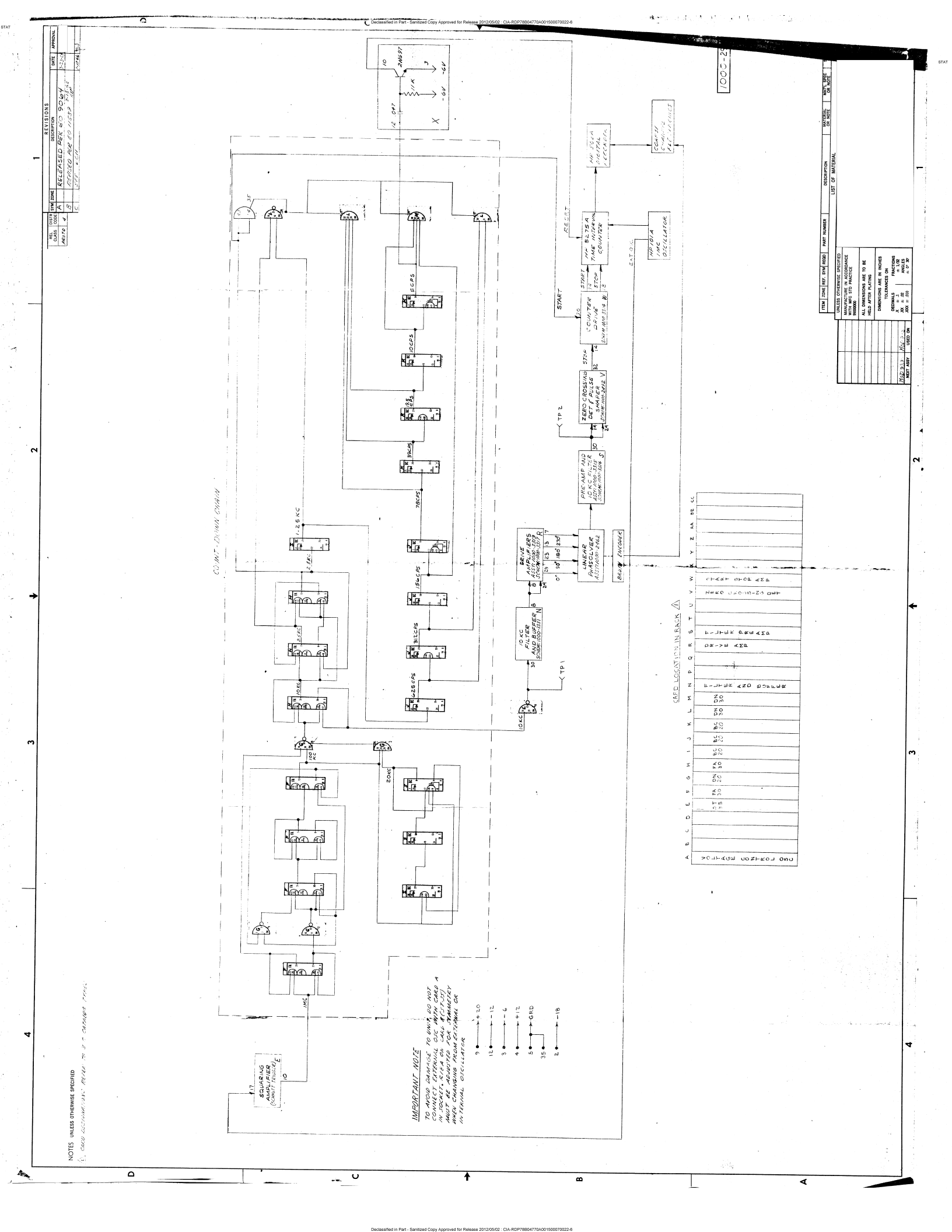
REVISIONS
DESCRIPTION
RELEASED PER ECO 9094
REVISED PER ECO 10328
COUNT-DOWN CHAIN
IMPORTANT NOTE
TO AVOID DAMAGE TO UNIT, DO NOT CONNECT EXTERNAL OSC WITH CARD A MODULE PLUGGED IN. CARD ACCESS MUST BE ADJUSTED FOR CLEARANCE WHEN CHANGING FROM EXTERNAL TO INTERNAL OSCILLATOR
SQUARING AMPLIFIER (SCHMITT TRIGGER)
10 KC FILTER AND BUFFER
DRIVE AMPLIFIERS
LINEAR PHASOLVER
PRE-AMP AND ZERO CROSSING DETECTOR
ZERO CROSSING DETECTOR & PULSE SHAPER
COUNTER CONTROL FLIP-FLOPS
COUNTER
MP 5275 A TIME INTERVAL COUNTER
MP 10A OSCILLATOR
CARD LOCATION IN RACK
LIST OF MATERIAL
UNLESS OTHERWISE SPECIFIED
NOTES UNLESS OTHERWISE SPECIFIED

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DRAWING CHANGE NOTICE

1000-1942 C

SHEET 1 OF 4

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM	PART NAME BLOCK DIAGRAM, MOD 933 LINEAR PHASOLVER				
IN FABRICATION	✓		SALES ASSEMBLY OR MODEL NO.	EFFECTIVE SERIAL NO.	CUSTOMER APPROVAL PER	SIGNATURE	DATE
IN STOCK	✓		MOD 933	1 & SUB		PREPARED BY	7/14/66
BOXED PARTS	✓					CHECKER	7/14/66
IN ASSEMBLIES	✓					ELECT APPROVAL	
IN BOND	✓					APPROVAL	7/21/66
CUSTOMER REWORK					ECP NO.	CHANGE CONTROL	7/21/66

CHANGE NO.	REMOVED OR CHANGED FROM	ZONE	ADDED OR CHANGED TO	AUTHORITY
1	REMOVED IMC VOLTAGE CONTROLLED OSC ASSY: 1000-3427 A 26 28 1K 30	9/D		
2	IMPORTANT NOTE (WAS) IF EXTERNAL OSC IS USED, CARD A SHOULD NOT BE IN; IF CARD A IS USED, EXTERNAL OSC. SHOULD NOT BE IN	9/C	(IS) TO AVOID DAMAGE TO UNIT DO NOT CONNECT EXTERNAL OSC WITH CARD A IN SOCKET. R18A ON CARD E (ST-35) MUST BE ADJUSTED FOR SYMMETRY WHEN CHANGING FROM EXTERNAL OR INTERNAL OSCILLATOR	

REASON: REVISED PER LATEST ENG. INFORMATION

REMARKS:

DRAWING NO. 1000 1942

FORM NO. 6-133 REV. 12/1/65

1815-3

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STAT
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DRAWING CHANGE NOTICE

DRAWING NO. 1000-3942 REV. C

SHEET 2 OF 4

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM	PART NAME BLOCK DIAGRAM MOD 933 LINEAR PHASOLVER
IN FABRICATION			
IN STOCK			
BOXED PARTS			
IN ASSEMBLIES			
IN BOND			
CUSTOMER REWORK			

SALES ASSEMBLY OR MODEL NO.	EFFECTIVE SERIAL NO.	CUSTOMER APPROVAL PER		SIGNATURE	DATE
			PREPARED BY		
			CHECKER		
			ELECT APPROVAL		
			APPROVAL		
		ECP NO.	CHANGE CONTROL		

CHANGE NO.	REMOVED OR CHANGED FROM	ZONE	ADDED OR CHANGED TO	AUTHORITY
3	(WAS) 5 KC	3/C	(IS) 2.5 KC	
4	(WAS) 205 KC	2/C	(IS) 2.5 KC	
5		2/B	ADDED BRUSH ENCODER	
6	CARD LOCATION E (WAS) FS 30	3/A	(IS) ST 35	
7	REMOVED SCOPE SYNC	2/C		
8	(WAS) ZERO CROSSING DET & PHASE — STOP 32 30	2/B	(IS) ZERO CROSSING DET & PULSE — STOP 32 14	
9	(WAS) 14 COUNTER START 18 STOP 34	2/B	(IS) 30 COUNTER START 34 STOP 15	

REASON

REMARKS

DRAWING NO. 1000-3942

FORM NO. 6-133 REV. 12/21/65

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DRAWING CHANGE NOTICE

DRAWING NO. 1000-2742 REV. C

SHEET 3 OF 4

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM
IN FABRICATION		
IN STOCK		
BOXED PARTS		
IN ASSEMBLIES		
IN BOND		
CUSTOMER REWORK		

PART NAME BLOCK DIAGRAM MOD. 933 LINEAR PHASOLVER

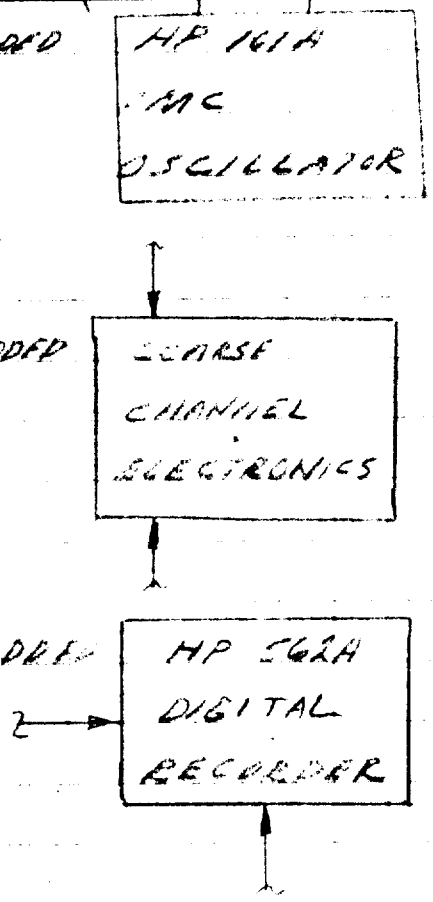
SALES ASSEMBLY OR MODEL NO.	EFFECTIVE SERIAL NO.

CUSTOMER APPROVAL PER

ECP NO.

	SIGNATURE	DATE
PREPARED BY		
CHECKER		
ELEC APPROVAL		
APPROVAL		
CHANGE CONTROL		

CHANGE NO.	REMOVED OR CHANGED FROM	ZONE	ADDED OR CHANGED TO	AUTHORITY
10		1/B	ADDED	
11		1/B	ADDED	
12		1/B	ADDED	



REASON

REMARKS

DRAWING NO. 1000-2742

FORM NO. 6-183 REV. 12/27/65

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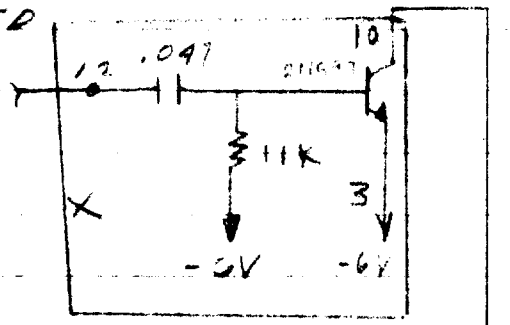
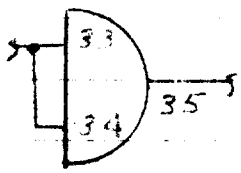
DRAWING CHANGE NOTICE

DRAWING NO. 1000-1742 RE C

SHEET 4 OF 4

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM	PART NAME BLOCK DIAGRAM MOD 2 LINEAR PHASOLVER					
IN FABRICATION			SALES ASSEMBLY OR MODEL NO.	EFFECTIVE SERIAL NO.	CUSTOMER APPROVAL PER		SIGNATURE	DATE
IN STOCK						PREPARED BY		
BOXED PARTS						CHECKER		
IN ASSEMBLIES						ELEC APPROVAL		
IN BOND						APPROVAL		
CUSTOME REWORK					ECP NO.	CHANGE CONTROL		

CHANGE NO.	REMOVED OR CHANGED FROM	ZONE	ADDED OR CHANGED TO	AUTHORITY
L3		1/C	ADDED 	
19		1/C	ADDED 	

REASON

REMARKS

DRAWING NO. 1000-1742

FORM NO. 6-133 REV. 12/1/66

1815-2

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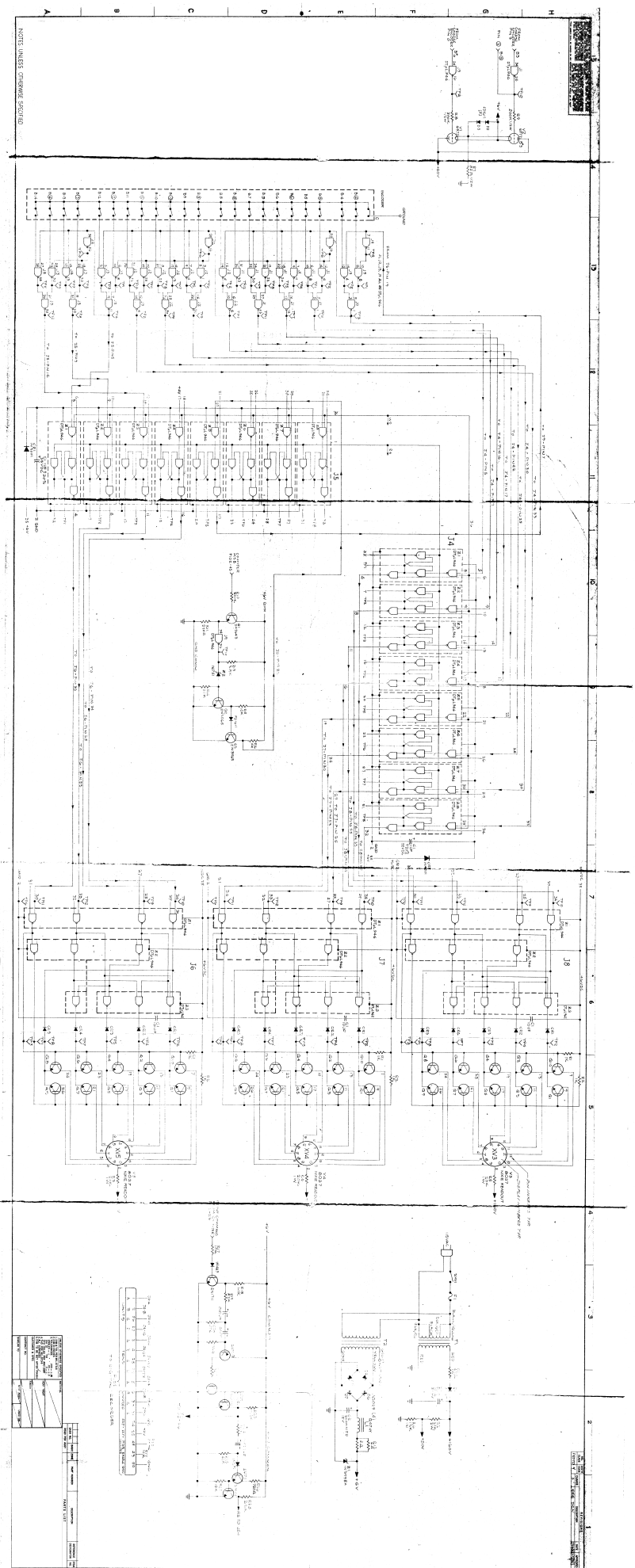
Declassified in Part - Sanitized Copy Approved for Release 2013/07/02 : CIA-RDP79M00472A000100020003-6



Declassified in Part - Sanitized Copy Approved for Release 2013/07/02 : CIA-RDP79M00472A000100020003-6

STAT
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DRAWING CHANGE NOTICE

700897 A

SHEET 1 OF 1

DISPOSITION OF PARTS	USE AS IS	MUST CONFORM	PART NAME MODEL 933 PHASOLVER, COARSE CHANNEL					
IN FABRICATION	–		SALES ASSEMBLY OR MODEL NO.	EFFECTIVE SERIAL NO.	CUSTOMER APPROVAL PER		SIGNATURE	DATE
IN STOCK	✓					PREPARED BY	STAT	7/26/66
BOXED PARTS	✓					CHECKER		7/26/66
IN ASSEMBLIES	✓					ELECT APPROVAL		
IN BOND	✓					APPROVAL		7/26/66
CUSTOMER REWORK	—				ECP NO.	CHANGE CONTROL		9/26/66

CHANGE NO.	REMOVED OR CHANGED FROM	ZONE	ADDED OR CHANGED TO	AUTHORITY
1	TITLE: SCHEMATIC, LINEAR PHASOLVER		SCHEMATIC, MODEL 933 PHASOLVER, COARSE CHANNEL	

REASON

REMARKS

DRAWING NO. 700897

6-133 10/21/65

1815-3

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Engineering Drawings

Linear Phasolver

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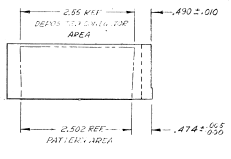
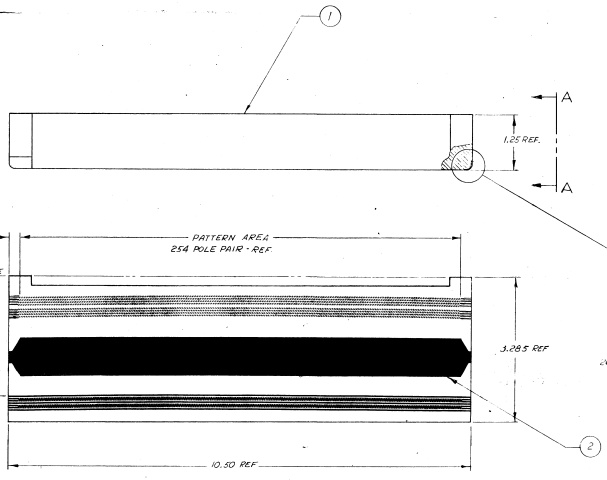
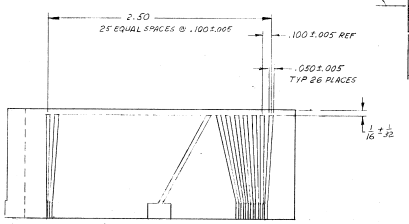
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7101	9/4/63	

NOTES: UNLESS OTHERWISE SPECIFIED

1. PATTERN RESISTIVITY 2.52/SQUARE MAX.
   DEPOSITED CONDUCTOR MAY BE ANY COMBINATION OF METALS BUT THE PATTERN SURFACE MUST BE NI, CR OR AN ALLOY OF NI & CR
2. PIN HOLES: NO PIN HOLES GREATER THAN .003 IN PATTERN







VIEW A-A
SCALE 2/1
TYP BOTH ENDS

10002459
A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
LIST OF MATERIAL								
2			1	10002461	PATTERN ASSY, DRIVER			
1			1	10002445	BLANK, DRIVER			

NEXT ASSY	USED ON
10002462	MOD. 933

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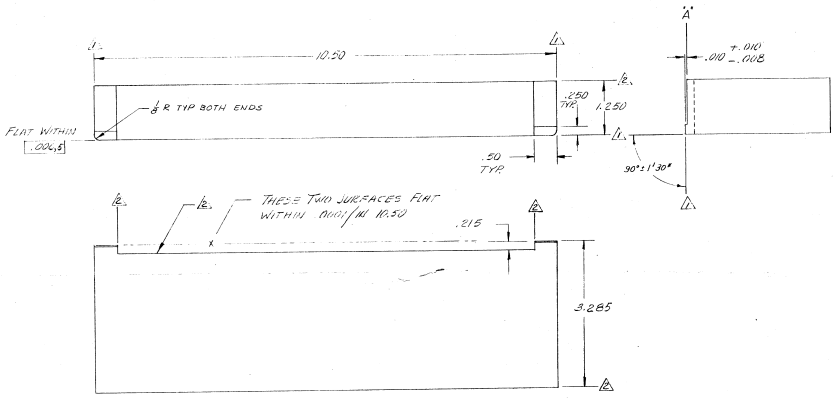
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7164	11 Aug 63	

NOTES UNLESS OTHERWISE SPECIFIED

1. OPTICAL QUALITY POLISH REQUIRED
2. GROUND SURFACE ACCEPTABLE



1000 2445
A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
—	—	—	—	—	GLASS	SPECIFICATION GL2455	—	—

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED
~~MANUFACTURE IN ACCORDANCE WITH SPECIFICATION~~
~~ALL DIMENSIONS ARE TO BE HELD AFTER PLATING~~
DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS: X ± .1; XX ± .02; XXX ± .010
FRACTIONS: ± 1/32
ANGLES: ± 0° 30'

NEXT ASSY	USED ON
1000 2457	MISC. ASS'Y

DIETZGEN-POST CLEARPRINT 3000

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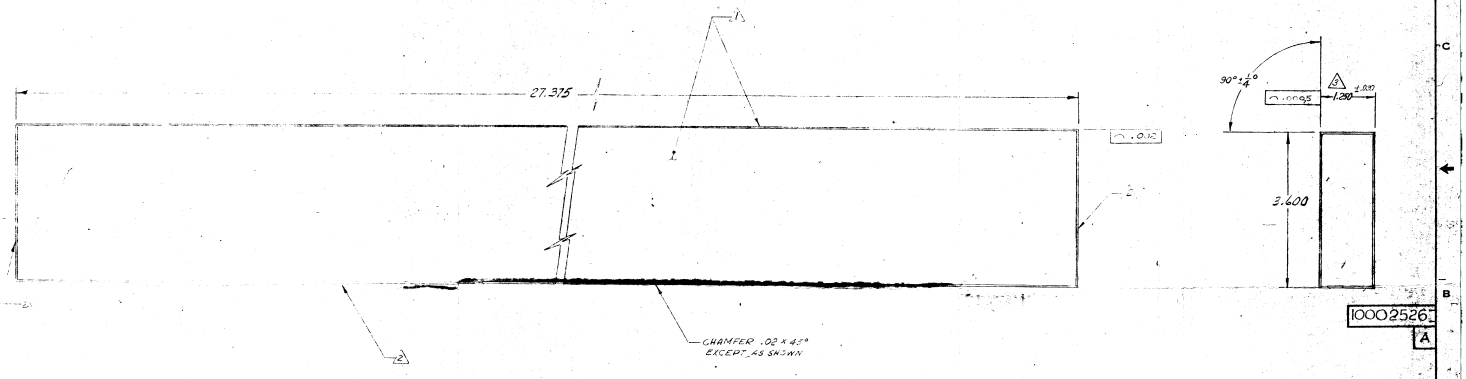
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVED
A		ORIGINAL ISSUE E.O. 7164		

NOTES: UNLESS OTHERWISE SPECIFIED

1. OPTICAL QUALITY POLISH REQUIRED ON SURFACE INDICATED
   OTHER SURFACES AS NECESSARY

2. THIS DIM. MUST MATCH PART NO. 10002447 WITHIN ±.005



10002526
A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
						SCRIBLICATE		

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED
~~MANUFACTURED IN ACCORDANCE WITH MFG. STD. PRACTICE AMS000~~
~~ALL SURFACES TO BE 125 MICRO-INCHES~~

DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS: X ± .1, XX ± .02, XXX ± .010
FRACTIONS ± 1/32
ANGLES ± 0° 30'

NEXT ASSY	USED ON
1010 2471	MFG 955

JAN 51A REFERENCE WILL NOT BE MICROFILMED

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STAT

ENGINEERING ORDER

No. 7234 SHT 1 OF 1

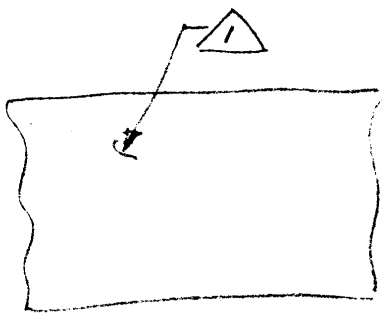
DOCUMENT NO. 1000 2526 REV. LTR. A

DOCUMENT NAME BLANK, GUIDE RAIL	MODULE MOD 933	SYSTEM PHASOLVER	RELEASE DATE 10-16-63 EK		
DATA RELEASE		10/16/63	RECORD CHANGE		DISPOSITION: RAW
DATA REVISION	V	10/16/63	CONVENIENT CHANGE		DISPOSITION: FINISHED PARTS
STOP ORDER		10/16/63	MANDATORY CHANGE	V	DISPOSITION: SUB ASSY
STOP ORDER RELEASE		10/16/63	EFFECTIVITY SER. NO. 12 SUBS.		DISPOSITION: FINAL ASSY.

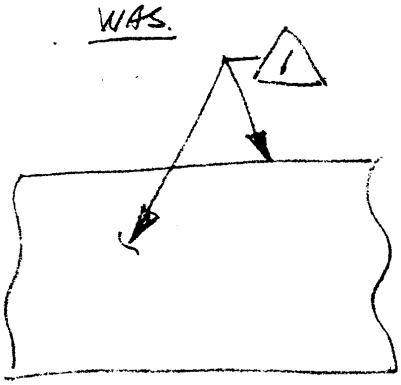
STAT

IN ZONE 2 & 3C;

IS



WAS.



ADDED △ TO NOTE 1. AND NOTE 2.

REASON FOR CHANGE:

ECONOMY OF MANUFACTURE

AFFECTED DOCUMENTS

NONE

TC-353

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REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7104		

NOTES UNLESS OTHERWISE SPECIFIED:

PROCEDURE:

1. FINISH DRILL HOLES FOR 1/8 DIA DOWEL PINS IN PARTS NOS 1000 2484, 1000 2485, 1000 2486, 1000 2487, 1000 2495 AND HEFES IN DOWEL PINS.
2. ASSEMBLE THESE PARTS AS SHOWN ON SHEET 2 AND PUT IN ALL ATTACHMENT SCREWS.
3. TAP OIL HOLES IN PILLOW BLOCKS (ITEM 34) TO 1/4-20 THDS. INSERT SCREWS ITEM 31.
4. ASSEMBLE PART NO 1000 2496 (ITEM 11) TO 1000 2493 USING ITEM 23. PUT THUMB SCREW, ITEM 26 IN PLACE IN PART NO 1000 2496. INSTALL MAGNETIC CATCH ~~TO BE AS THIS ASSEM USING ITEM 27~~.
5. SLIDE THIS ASSEM ON GUIDE ROD NO 1000 2482, PLACE PILLOW BLOCKS ITEM 34 ON EITHER END AND PUT IN TABLE ON END PANELS 1000 2487 & 1000 2495 AND INSTALL AND TIGHTEN MOUNTING SCREWS ITEM 20. ROD SHOULD BE PARALLEL WITH INSIDE SURFACE OF BACK PANEL 1000 2484 WITHIN .010 T.I.R. AND MUST SLIDE FREELY WITH THUMB SCREW LOOSE.
6. SLIDE THIS ASSY TO WITHIN 1/4 INCH OF ITS POSSIBLE TRAVEL (R.H. SIDE) LOCATE AND DR-L HOLE INDICATED ON FRONT PANEL DRAWING (1000 2488) TO ASSEMBLE CATCH PLATE ITEM 14 AND ITEM 3 (1000 2470) 4) SHIMS IF NEEDED. MAGNET & PLATE MUST HOLD POSITION ARM WHEN RAISED IN VERTICAL POSITION.
7. LOCATE POSITION ROD STOP (ITEM 8) SO IT WILL PASS THRU SLOT PROVIDED IN PANEL WHEN SWUNG TO EXTREME POSITION, THEN REMOVE ASSEM, DRILL & TAP, INSTALL STOP AND REPLACE ASSEMBLY. INSTALL SHIM RING (ITEM 29) WASHER (ITEM 18) SPLIT WASHER (ITEM 19), CAP SCREW (ITEM 22) AT LEFT HAND END AND TIGHTEN.
8. INSTALL 4 FLAT HD SET SCREWS ITEM 16, 2 - BACK PANEL 1 - R.H. END PANEL
9. INSTALL LEG - ITEM 33 USING SCREWS ITEM 21.
10. INSTALL THE DRAW BRACKETS BY SPENDING PROPER 6-32 CAP SCREWS & REPLACING.
11. INSTALL ADJUSTMENT SCREWS ITEM 12 IN PLACE. INSTALL ITEM 25 IN PLACE.

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
36								
35	1/0		1	# 655	MAGNETIC CATCH			
34	2/B		2	1X813	PILLOW BLOCK			
33	2/C		3	NO 516	LEG, BOX			
32								
31	4/B		2	1/4-20 X 3/8	SOCKET CAP SCREW			
30	3/D		4	1/4-20 X 1 3/8	SOCKET CAP SCREW			
29	3/C		1	MS16624	SNAP RING			
28	2/B		1	1032 X 1/2	FLAT SLOTTED SCREW			
27	3/B		3B	632 X 1.0	SOCKET CAP SCREW			
26	4/D		1		THUMB SCREW			
25	4/C		1	832 X 3/4	SOCKET CAP SCREW			
24	3/B		2	832 X 1/2	SOCKET CAP SCREW			
23	3/D		2	1032 X 1 1/4	SOCKET CAP SCREW			
22	3/C		1	5/16-18 X 1 1/2	SOCKET CAP SCREW			
21	3/D		3	1024 X 1 3/4	ROUND HEAD SLOTTED			
20	3/A		4	1/4-20 X 1 1/4	SOCKET CAP SCREW			
19	3/C		1	5/16	SPLIT WASHER (LOCK)			
18								
17	2/B		8	1/8 X 1 1/4 L	DOWEL PIN			
16	1/C		1	105-0555	ADJUSTMENT SCREW			
15								
14	3/A		1	R.H.	CATCH PLATE - CABINET (MAY BE PURCH. F.W. WOOLWORTH CO.)			
13	2/C		1	1/8 O.D. X 3/4 L	WASHER			
12	1/C		3	1000 2481-6	POSITIONING SCREW			
11	3/C		1	1000 2496	ADJUSTMENT SLIDE			
10	3/D		1	1000 2451-2	CLAMP - TIE DOWN			
9	4/C		1	1000 2481-4	SPACER, CATCH PLATE			
8	3/B		1	1000 2481-8	STOP			
7	4/D		1	1000 2483	POSITION ARM			
6	1/B		1	1000 2495	END PANEL L.H.			
5	3/B		1	1000 2482	GUIDE ROD			
4	3/C		1	1000 2484	BOTTOM PANEL			
3	3/B		1	1000 2485	FRONT PANEL			
2	1/B		1	1000 2486	BACK PANEL			
1	4/B		2	1000 2487	END PANEL R.H.			

LIST OF MATERIAL

1000 2471

A

1000 2462	NOD 393	
NEXT ASSY	USED ON	

UNLESS OTHERWISE SPECIFIED

~~MANUFACTURE IN ACCORDANCE WITH SPD STD PRACTICE 2000000~~

~~ALL DIMENSIONS ARE TO BE HELD AFTER PLATING~~

DIMENSIONS ARE IN INCHES

TOLERANCES ON

DECIMALS: X ± .1, XX ± .02, XXX ± .010

FRACTIONS ± 1/32

ANGLES ± 0° 30'

APPROVED FOR RELEASE 2012/05/02 REFERENCE WILL NOT BE MAINTAINED

DIETZGEN POST CLEARPRINT 1000

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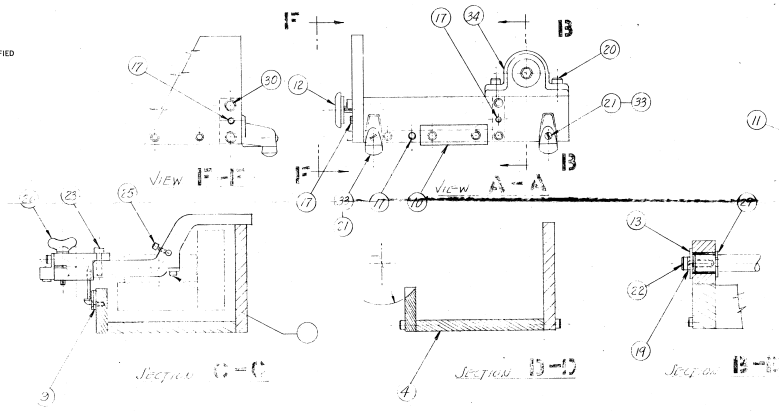
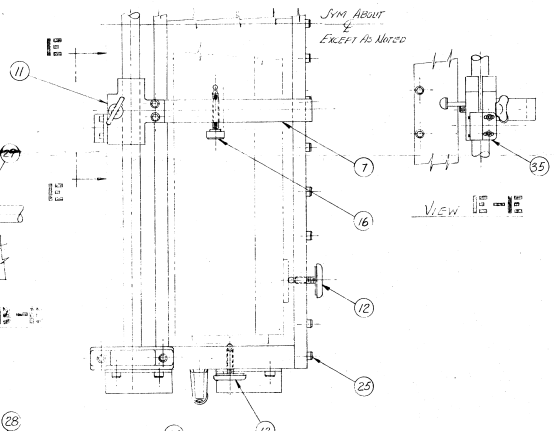
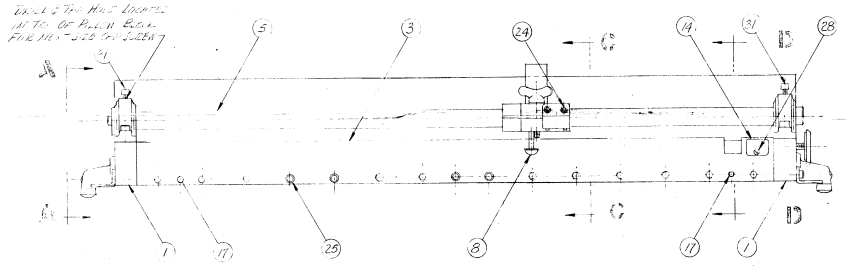
REVISIONS			
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
		SEE SHEET 1 OF 2		

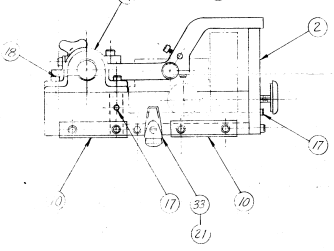
NOTES UNLESS OTHERWISE SPECIFIED





DRILL 2 TAP HOLES LOCATED IN TOP OF PULLIN BLOCK FOR NO. 1-3/8 SCREW





1000 2471

A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MAT'L SPEC OR NOTE	STOCK SIZE OR NOTE

LIST OF MATERIAL

NEXT ASSY	USED ON
	MOD. 2

UNLESS OTHERWISE SPECIFIED

MANUFACTURE IN ACCORDANCE WITH MFG STD PRACTICE 99000000

ALL DIMENSIONS ARE TO BE HELD AFTER PLATING

DIMENSIONS ARE IN INCHES

TOLERANCES ON

DECIMALS	FRACTIONS
X ± .1	± 1/32
.XX ± .02	ANGLES
.XXX ± .010	± 0° 30'

STAT

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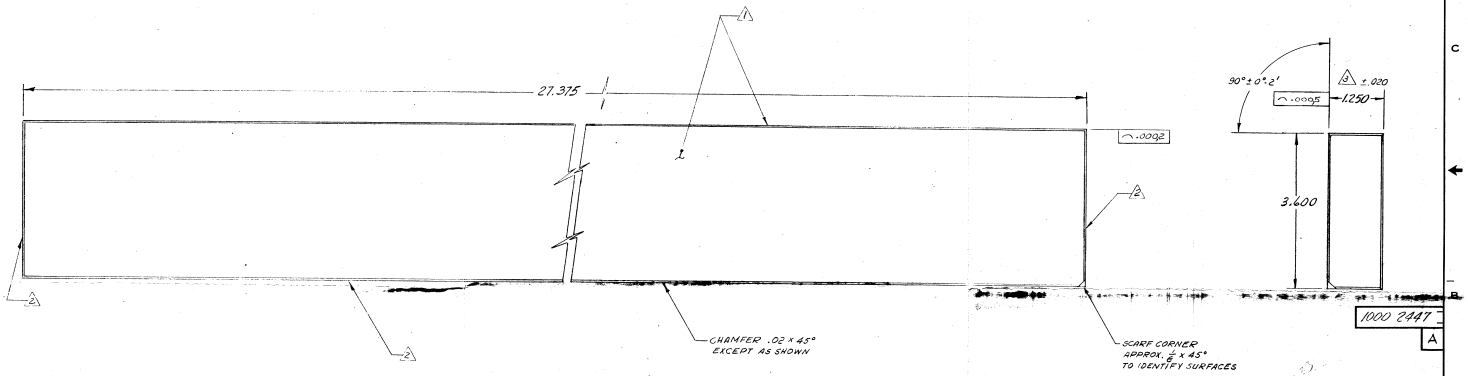
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7164		

NOTES: UNLESS OTHERWISE SPECIFIED

1. OPTICAL QUALITY POLISH REQUIRED ON SURFACE INDICATED
2. GROUND SURFACE ACCEPTABLE

3 THIS DIM MUST MATCH PART NO 1000 2526 WITHIN ±.005



1000 2447 A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
					GLASS	BOROSILICATE		

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED

~~MANUFACTURE IN ACCORDANCE WITH MFG STD PRACTICE 30000000~~

~~ALL DIMENSIONS ARE TO BE HELD AFTER PLATING~~

DIMENSIONS ARE IN INCHES

TOLERANCES ON

DECIMALS	FRACTIONS
X ± .1	± 1/32
XX ± .02	ANGLES
XXX ± .010	± 0° 30'

NEXT ASSY	USED ON
1000 2458	AND 923

JOINT USE REFERENCE WILL NOT BE MAINTAINED

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STAT

ENGINEERING ORDER

No. 7233 SHT 1 OF 1

DOCUMENT NO. 1000 2447 REV. LTR. A

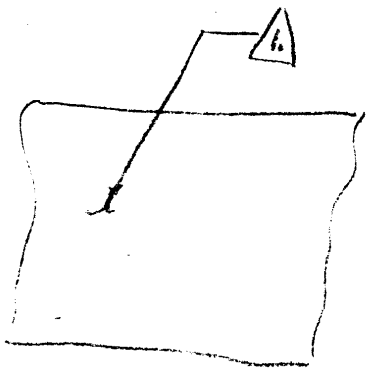
DOCUMENT NAME COUPLER PATTERN BLANK | MODULE MOD. 933 | SYSTEM PHASOLVER | RELEASE DATE 10-16-63 EK

STAT

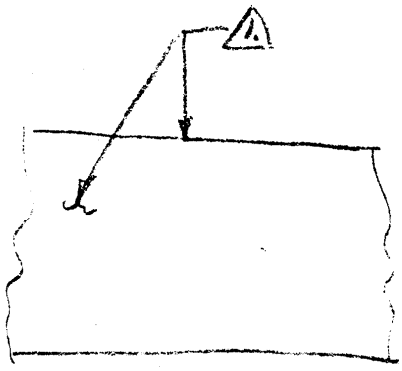
DATA RELEASE		10/16/63	RECORD CHANGE		DISPOSITION: RAW
DATA REVISION	✓	10/16/63	CONVENIENT CHANGE		FINISHED PARTS
STOP ORDER		10/16/63	MANDATORY CHANGE	✓	SUB ASSY
STOP ORDER RELEASE		10/16/63	EFFECTIVITY SER. NO. 1 & SUBS		FINAL ASSY.

IN ZONE 2 & 3C :

IS



WAS



ADDED △ TO NOTE 1 AND NOTE 2

REASON FOR CHANGE:
Economy of manufacture

AFFECTED DOCUMENTS
NONE

FC-353

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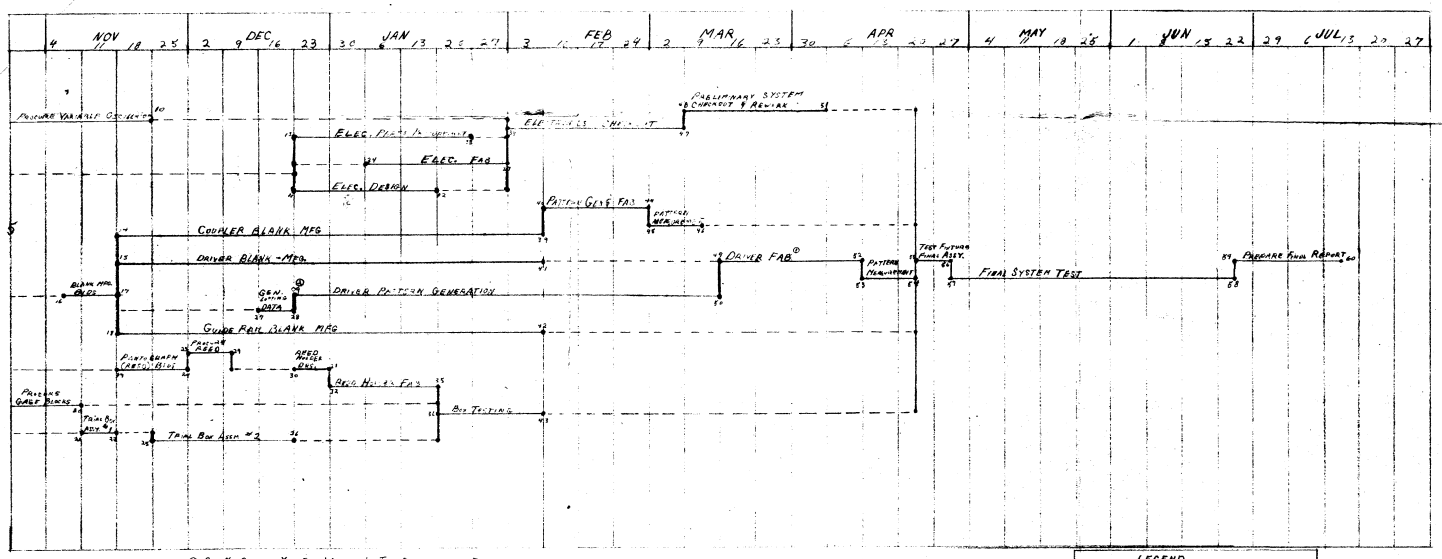
LINEAR PHASOLVER® SYSTEM
MASTER SCHEDULE

11 DEC. 1963



② BID NOT RECEIVED YET. FOUR WEEKS IS THE ENGINEERING ESTIMATE.
② THIS START DATE PRECIPITATED ISSUANCE OF THE P.O. BY THAT DATE.
® TRADEMARK OF TELECOMPUTING CORP.

LEGEND
ACTIVITY
START EVENT — END EVENT
SLACK
INTERDEPENDENCY

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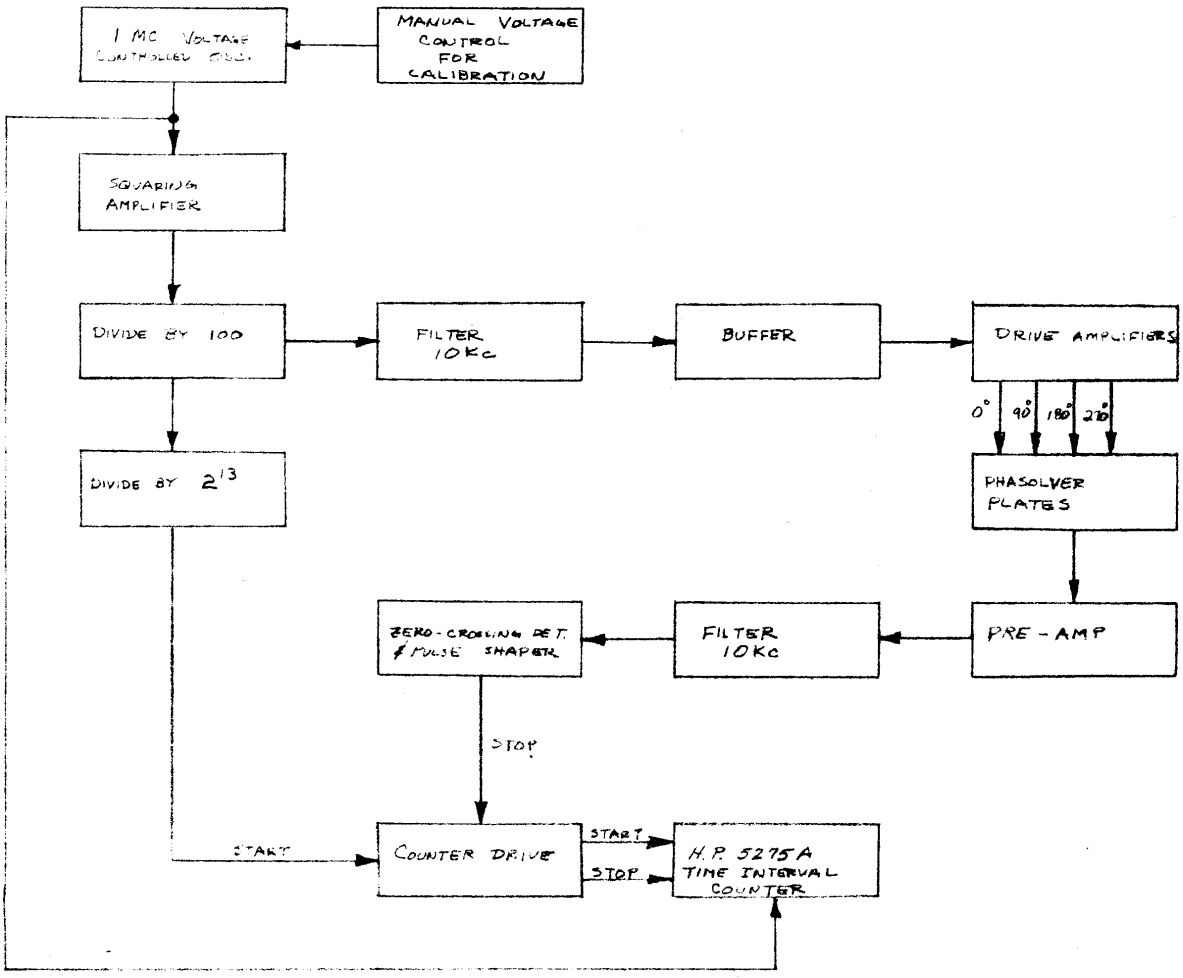
STAT



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STAT
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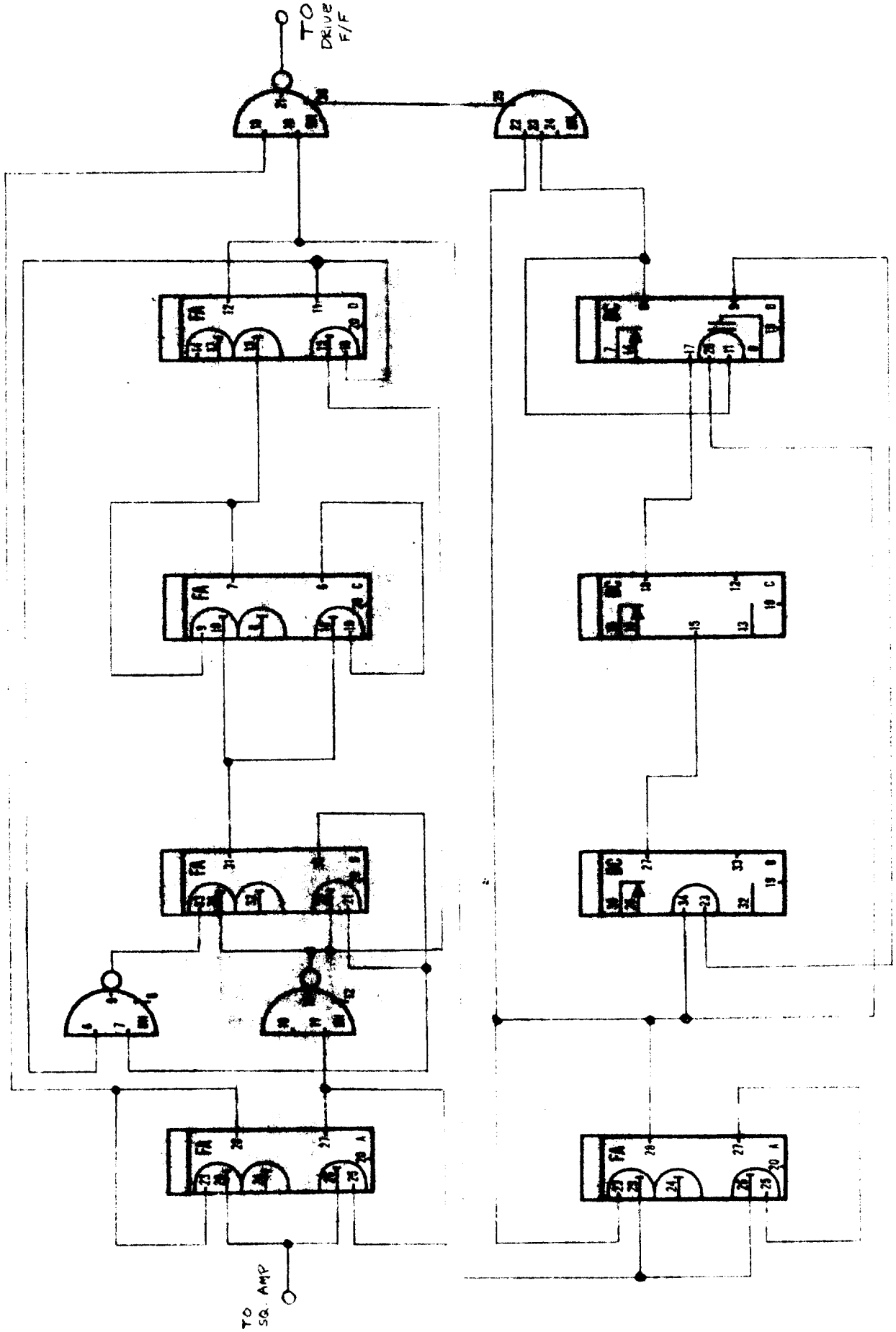

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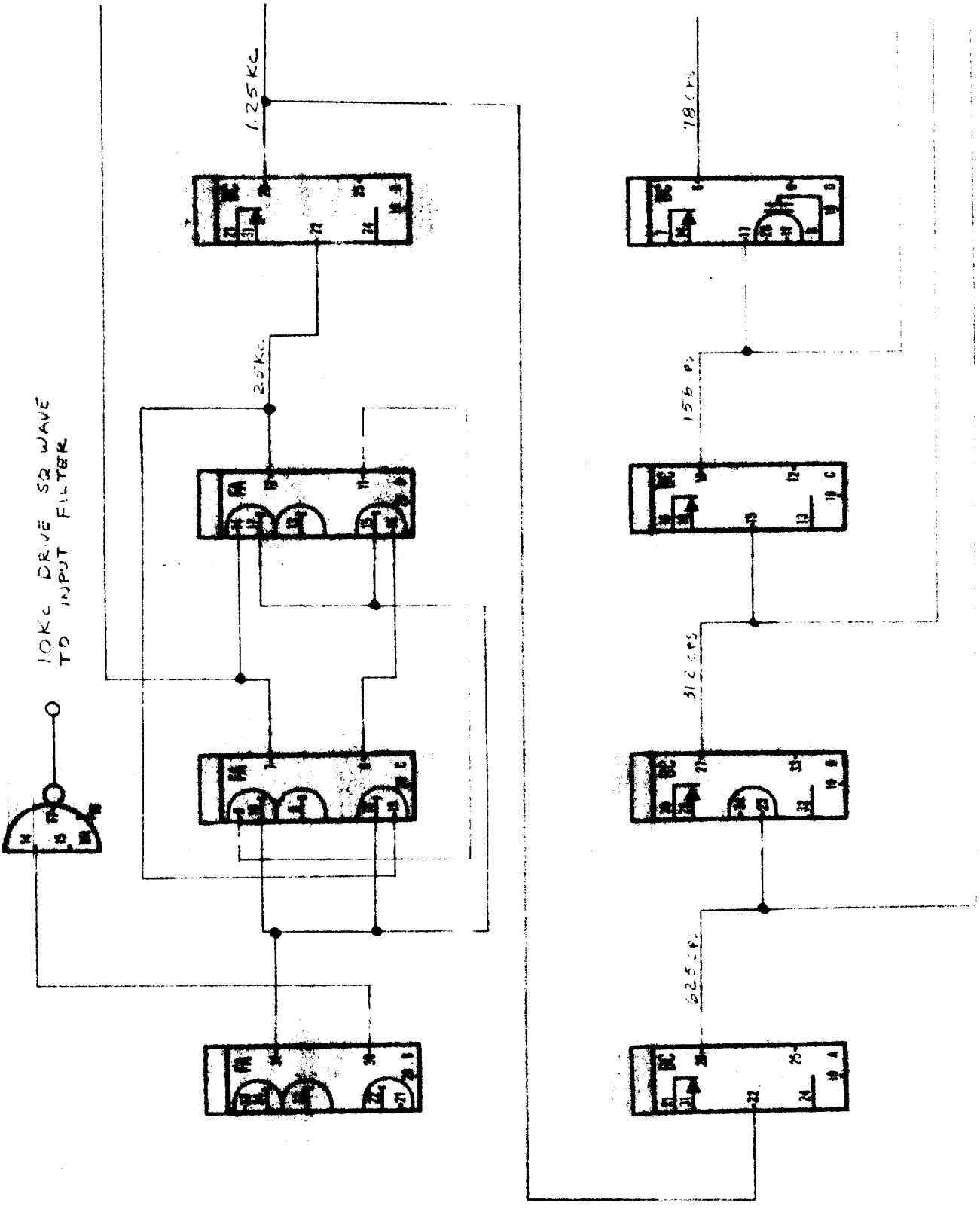

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STAT
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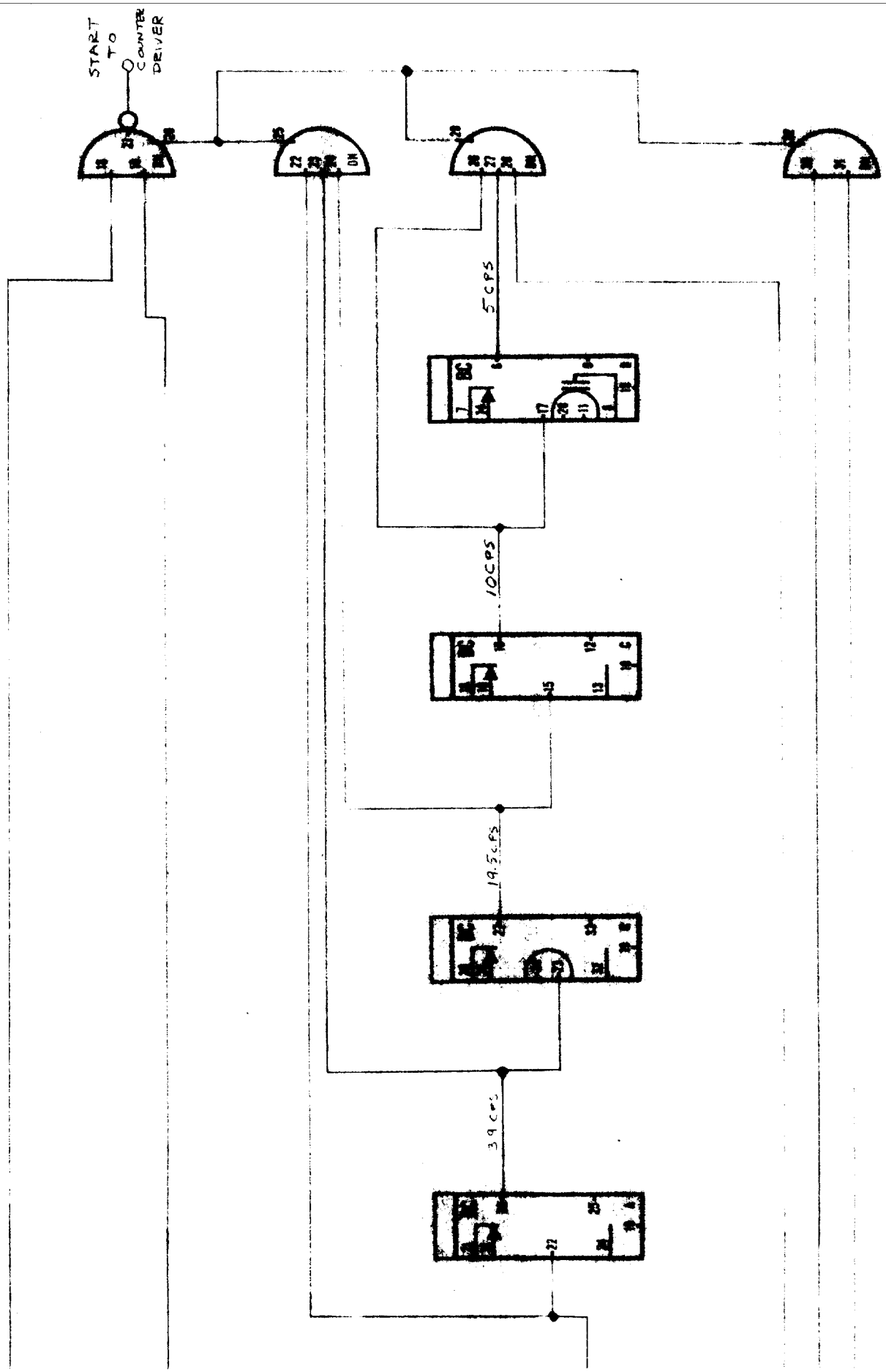

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FIFTH MONTHLY PROGRESS REPORT

MODEL 93[redacted] RASOLVER SYSTEM

[redacted] December 1963

SUMMARY

A. The following items were accomplished during this report period:

1. The pantograph reed assembly and voltage controlled oscillator have been delivered.

2. Most of the electronic materials required for the Phase II system have been ordered. The remaining materials will be ordered after completion of the drive amplifier and preamplifier circuit modifications for 10 kcs operation.

3. The purchase orders for the coupler, driver, and guide rail glass blanks have been released. The vendor is [redacted] The coupler pattern and part fabrication have been ordered. The vendor is [redacted] The internal purchase requisition for the driver master has been approved, but placement of the order requires prior customer approval. Order placement date cannot be accurately predicted. An estimated date of 23 December 1963 has been used in the enclosed master schedule. The selected vendor is [redacted]

4. A master schedule for the remainder of the program has been prepared. Estimates were used to predict the issuance of the purchase order for the driver master and the fabrication time interval of the driver part. With these assumptions it appears that the program completion has slipped three weeks to about 2[redacted] Jul, 1964 instead of the originally scheduled completion of 30 June 1964. Every attempt will be made to bring the end date back into line with the original schedule.

B. Potential Problem Areas

The procurement of the fabrication of the driver continues to be a problem. [redacted] have verbally stated that they are willing to bid this fabrication. We are presently awaiting their formal bid, but additional alternate sources will be investigated for this task.

We were not able to obtain a written bid from [redacted] on the driver master generation. They simply did not respond to the many calls, wires, and letters that were sent to them. In the interest of the project schedule

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STAT it was decided to select [redacted] for this task. This work is of a very special nature, and it is hoped that the availability of only one source will not jeopardize allowance of the purchase order.

C. Schedule

As seen from the enclosed schedule, there is one critical path (no slack) and it contains the generation of loft data, driver pattern generation, driver fabrication, and [redacted] test measurements events to the week of 20 April 1964. Subsequent to this time the final test fixture assembly, system test, and final report events will occur. All other paths have slack, and no major problems are anticipated in these areas.

D. Work During Next Report Period:

STAT 1. Generate the loft data for the driver master and place the purchase order with [redacted] for the fabrication of driver master.

2. Start and complete the reed holder design.

3. Start the reed holder fabrication.

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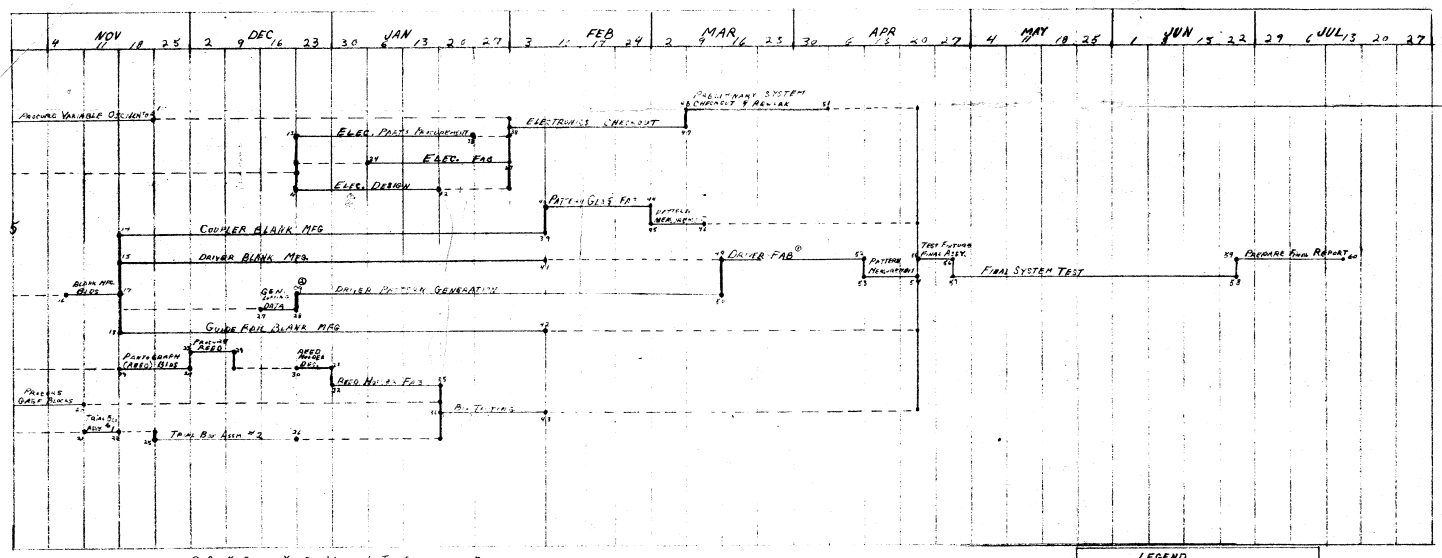
LINEAR PHASOLVER* SYSTEM
MASTER SCHEDULE

11 DEC. 1963



② BID NOT RECEIVED YET, FOUR WEEKS IS THE ENGINEERING ESTIMATE.

@ THIS START DATE PRE-PROB. ISSUANCE OF THE P.O. BY THAT DATE.

* TRADEMARK OF TELECOMPUTING CORP.

LEGEND

ACTIVITY — START EVENT → END EVENT — INTERDEPENDENCY

SLACK

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STAT

SYSTEM: Model 903 | DATE: 7/10/63
M.O. 342 | ORIGINATOR:

LINEAR PHASOLVER PROGRAM SCHEDULE - PHASE II

TASK DESCRIPTION	YEAR / MONTH / Week	1963 July	August	September	October	November	December	1964 January	February	March	April	May	June
1. Pattern Design													
2. Artwork and Master Mfg.													
3. Blank Mfg.													
4. Plate Mfg.													
5. Mechanical Design													
6. Drafting													
7. Mechanical Fabrication													
8. Electronic Cage Procurement													
9. Check of Coupler Scale													
10. Gage Block Purchase													
11. Final Assembly													
12. Mech. Test and Checkout (rework if necessary)													
13. System Tests													
14. Final Report													
15. Monthly Progress Reports													

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STAT

SYSTEM Model 982 | DATE 7/12/63
M J O 342 | ORIGINATOR

LINEAR PHASOLVER PROGRAM SCHEDULE - PHASE I

TASK DESCRIPTION	YEAR / MONTH / Week	1963 July 22 29	August 5 12 19 26	September 2 9 16 23 30	October 7 14 21 28
1. Rework Driver		△			
2. Fabricate Coupler		△			
3. Design Fixture for Coupler		△			
4. Fab. Fixture for Coupler		△			
5. Design and Coordination of Final Setup			△		
6. Testing				△	
7. Report					△
8. Electronics Package					
a. Design Configuration		△			
b. Procurement of Parts		△			
c. Wiring and Stuffing			△		
d. Test			△		

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Engineering Drawings

Linear Phase Over

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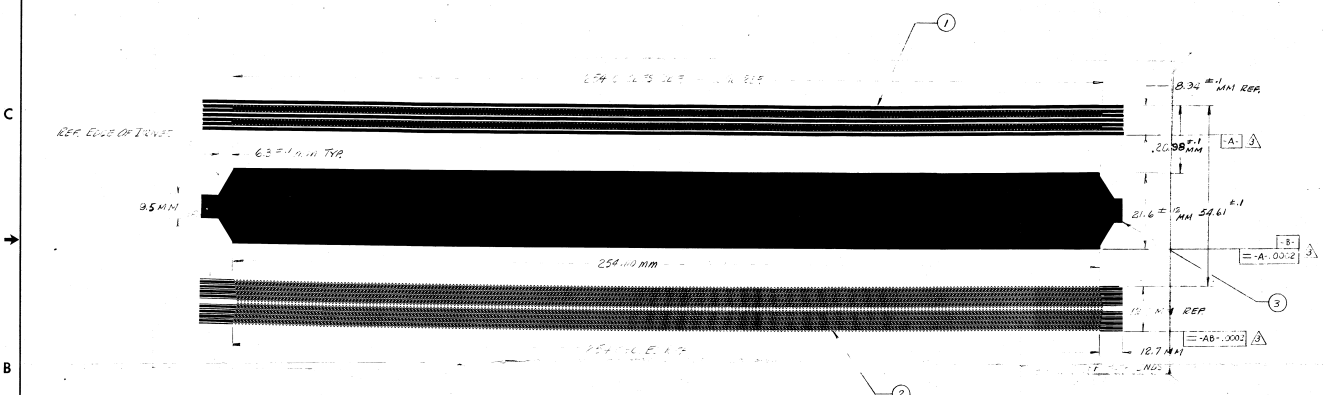
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7101	10/15/63	
B		REVISED PER E.O. 7620 11-26-63 EE	12/4/63	
C		REVISED PER E.O.	1/21/64	

NOTES UNLESS OTHERWISE SPECIFIED

1. IF A MASTER PHOTO IS GENERATED TO MAKE PART NO. 1000 2459, THE TOLERANCES SHOWN MUST BE MET. IF ITEMS 1, 2&3 APPEAR TOGETHER FOR THE FIRST TIME ON PRINT NO. 1000 2459, THESE FINISH TOLERANCES APPLY TO THAT PART.
2. THERE IS NO PHASE RELATIONSHIP REQUIRED BETWEEN ITEMS 1 & 2.

3 PARALLELISM OF PATTERNS TO BE .0002 IN 10.00 INCHES



1000 2461

LIST OF MATERIAL								
ITEM	ZONE	REF. SYM.	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MAT'L SPEC OR NOTE	STOCK SIZE OR NOTE
3			1	-3	OUTPUT BAND			
2			1	1000 2406	COMPLEMENTARY PATTERN			
1			1	1000 2405	SUPPLEMENTARY "			

UNLESS OTHERWISE SPECIFIED
MANUFACTURE IN ACCORDANCE WITH MFG. STD. PRACTICE
ALL DIMENSIONS ARE TO BE
DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS: X ± .1, XX ± .02, XXX ± .010
FRACTIONS ± 1/32
ANGLES ± 0° 30'

NEXT ASSY	USED ON
1000 2459	MOD 432

DIETZGEN-POST CLEARPRINT 1000

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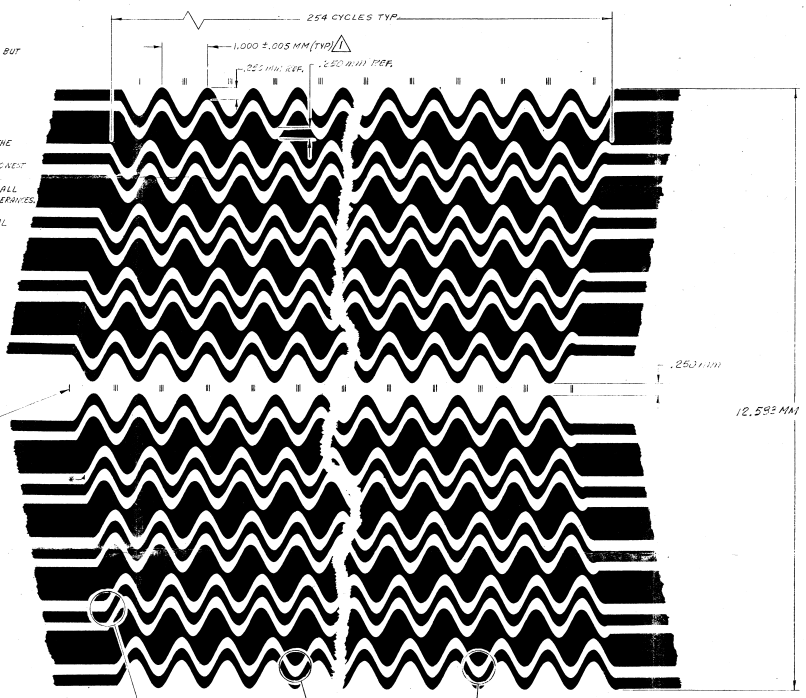
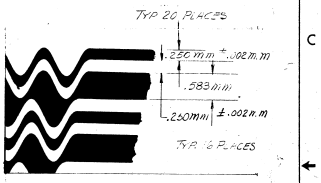
REVISIONS			
SYM	ZONE	DESCRIPTION	DATE
A		ORIGINAL ISSUE E.O. 7101	10/7/63
B		REVISED PER E.O.	12/1/70

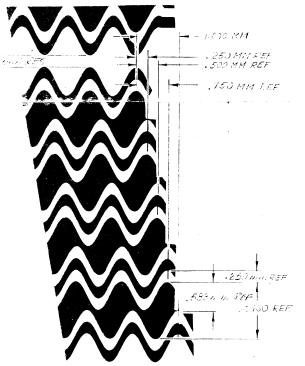
△1 LENGTH OF 245 CYCLES MUST BE 10.900 ± .001 @ 68°F.
2 AMPLITUDE OF SINE WAVES IS CONTROLLED BY LOFT DATA, BUT SHOULD BE 1.0230 ± .0005 IN PEAK-TO-PEAK @ FINAL SIZE AND MUST BE ALL ALIKE WITHIN ± .003C

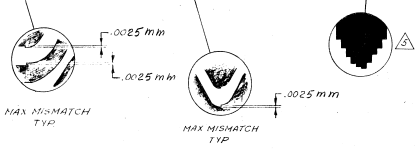
△3 ONE SINGLE & ONE PAIR OF FIDUCIAL MARKS MUST BE REPRODUCED ON THE FINAL PART (10002459) TO CHECK THE ACCURACY OF THE STEP-AND-REPEAT PROCESS AND THE REDUCTION RATIO BETWEEN MASTER AND PART. THE NARROWEST DIMENSION OF WHITE SPACE BETWEEN CORRESPONDING SUPERIMPOSED FIDUCIAL MARKS, THE FIDUCIAL MARKS SHALL BE PART OF THE ORIGINAL ART WORK & SHALL BE HELD TO THE SAME TOLERANCES.

△4 A STEP WISE APPROXIMATION TO THE SINUSOIDAL WAVE IS ACCEPTABLE, PROVIDED THAT NO LESS THAN 100 EQUAL STEPS PER CYCLE ARE USED.









10002408
A

ITEM	ZONE	REF. SYM. REV.	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL. SPEC. OR NOTE	STOCK SIZE OR NOTE
LIST OF MATERIAL							

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
FINISH
TOLERANCES ON:
DECIMALS
FRACTIONS

10002461 MOD 933
NEXT ASSY USED ON

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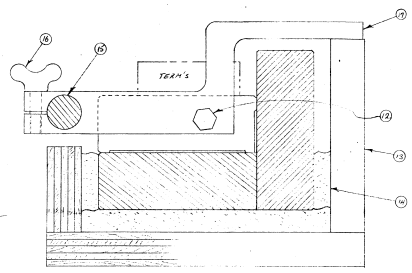
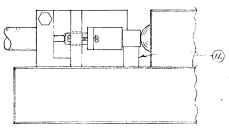


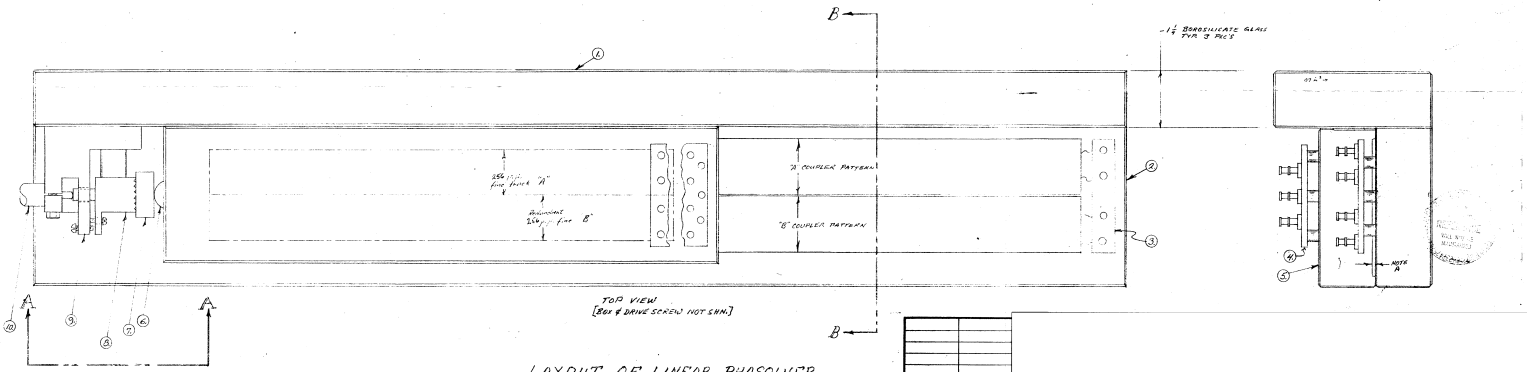
VIEW B-B
[SHOWING BOX & DRIVE MECHANISM]

DASH NO.	PART	MAT'L	COMMENTS
1	GUIDE	BOROSILICATE GLASS	.081 #/in³
2	COUPLER	"	controls scale of device
3	COUPLER TERM. BD.		All Term's not shn.
4	DRIVER TERM. BD.		" " " "
5	DRIVER	BOR. GLASS	
6	SPHERICAL SEGMENT	HARD S.S.	Cement to glass
7	JO. BLOCK		
8	ANVIL		
9	BAR		Cement to glass
10	PROBE, ELEC GAGE		Ref. resolution .1 K, or 10 μ in.
11	PAD	CORK or PITH	To support blocks & protect platform
12	DRIVE SCREW	1/4 DIA 80 THDS/IN	
13	BOX	3/4 PLYWOOD	Removable set screws locate phasolver
14	PADDING	FLEX FOAM	Holes provided for temporary set screws.
15	RAIL		
16	SLIDING NUT	1/4-28	Attaches to box
17	SLIDING CLAMP		

7.8 lbs.



VIEW A-A



TOP VIEW
[BOX & DRIVE SCREW NOT SHN.]

LAYOUT OF LINEAR PHASOLVER

NEXT ASSY	USED ON

STAT

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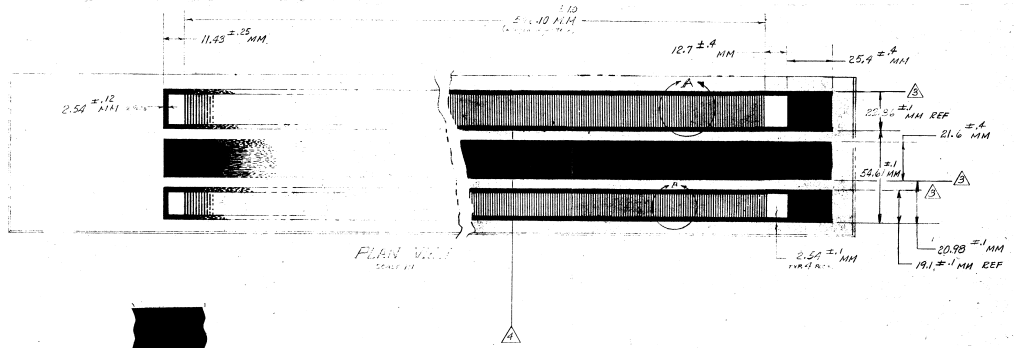
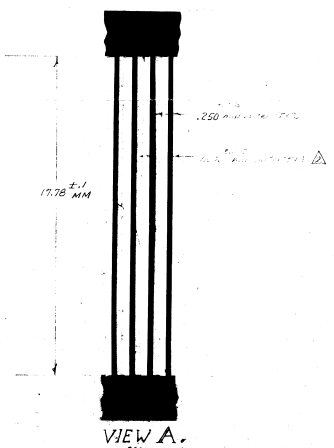
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7101		

NOTES: UNLESS OTHERWISE SPECIFIED

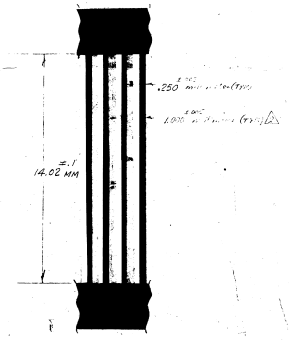
1. IF A SEPARATE MASTER TRANSPARENCY IS MADE THE DIMENSIONS SHOWN APPLY. IF THE PATTERN IS GENERATED ON THE FINISHED PART THE DIMENSIONS SHOWN APPLY TO PART NO 1000 2453.
2. THESE TOLERANCES ARE NOT CUMULATIVE. THE MAX. SCALE ERROR AT 68° F SHALL BE ±.1 MM.
3. ALL HORIZONTAL LINES IN PATTERN MUST BE PARALLEL WITHIN .05 MM IN 254.10 MM.
4. ALL VERTICAL .250 MM BARS TO BE PARALLEL WITHIN 0°0'-5" IN BOTH PORTIONS OF PATTERN.



PLAN VIEW



VIEW A
SCALE: 10X



VIEW B
SCALE: 10X

1000 2457
A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE

LIST OF MATERIAL

~~UNLESS OTHERWISE SPECIFIED~~
~~MANUFACTURE IN ACCORDANCE WITH MFG. STD. PRACTICE 0000000.~~
~~ALL DIMENSIONS ARE TO BE HELD AFTER PLATING~~
DIMENSIONS ARE IN INCHES
~~TOLERANCES ON~~
~~DECIMALS FRACTIONS~~
~~ANGLES~~

1000 2455	MOD. 933
NEXT ASSY	USED ON

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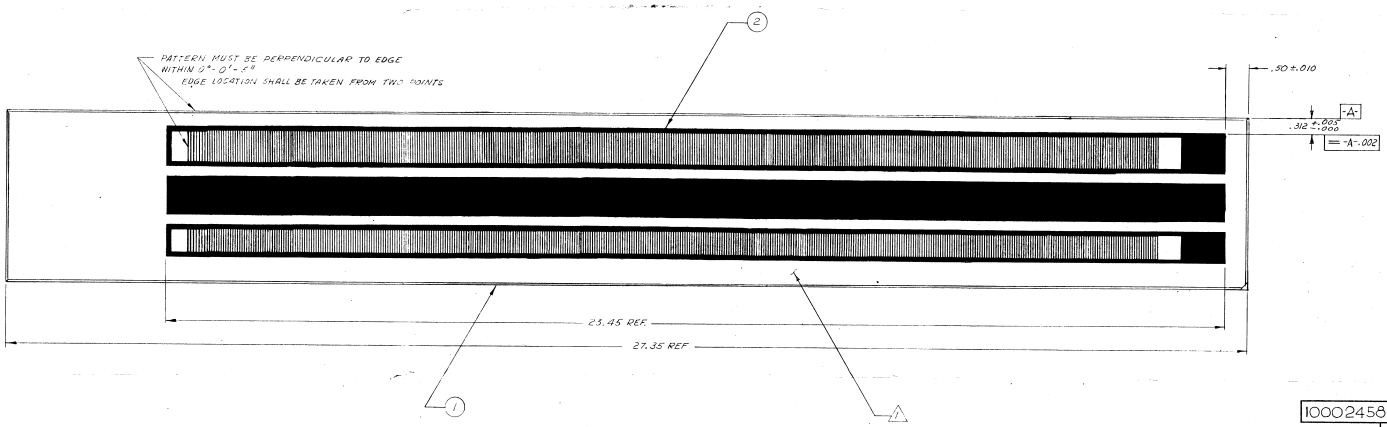
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7101		

NOTES: UNLESS OTHERWISE SPECIFIED

1. PATTERN TO BE APPLIED TO POLISHED SURFACE INDICATED
2. PATTERN RESISTIVITY 2 Ω / SQUARE MAX.
3. DEPOSITED CONDUCTOR MAY BE ANY COMBINATION OF METALS BUT THE PATTERN SURFACE MUST BE NI, CR OR AN ALLOY OF NI & CR
4. NO PIN HOLES GREATER THAN .003"
5. THERE IS NO PHASE RELATIONSHIP REQUIREMENT BETWEEN PATTERNS (ITEMS 1 & 2



10002458
A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE
2			1	10002457	PATTERN			
1			1	10002447	COUPLER BLANK			

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED
~~MANUFACTURE IN ACCORDANCE WITH MFG STD PRACTICE~~
~~1000000~~
~~ALL DIMENSIONS ARE TO BE~~
~~TAKEN AFTER PLATING~~
DIMENSIONS ARE IN INCHES
TOLERANCES ON
DECIMALS: X ± .1, XX ± .02, XXX ± .010
FRACTIONS ± 1/32
ANGLES ± 0° 30'

10002462 NEXT ASSY | MOD. 933 USED ON

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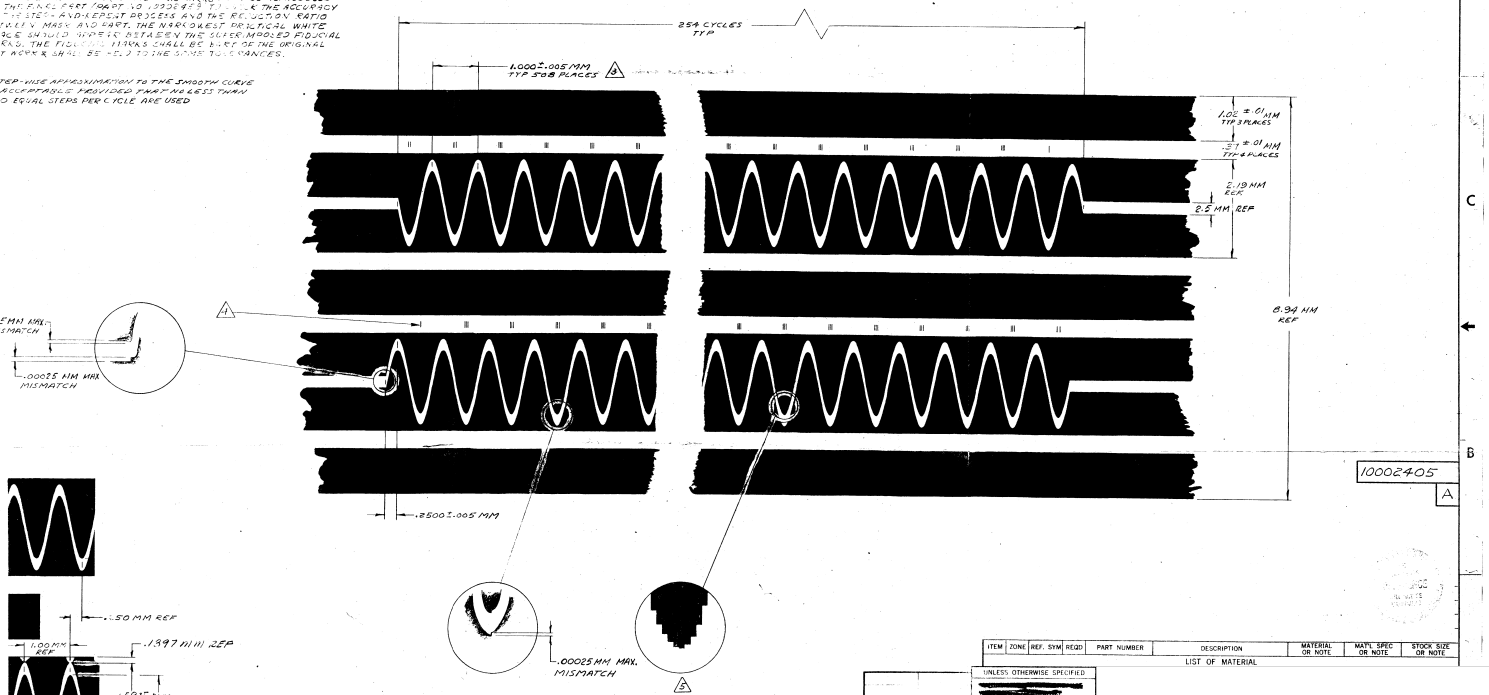
REVISIONS				
SYM	ZONE	DESCRIPTION	DATE	APPROVAL
A		ORIGINAL ISSUE E.O. 7101		

1. LENGTH OF 254 CYCLES MUST BE 10.000±.001 @ 68°F
2. AMPLITUDE OF SINE WAVES IS CONTROLLED BY LOFT DATA, BUT SHOULD BE .0652±.0005 PEAK-TO-PEAK @ FINAL STAGE, BUT ALL ALIKE ±.0005

△1 THIS TOLERANCE IS NOT CUMULATIVE. THE MAX. SCALE ERROR AT 68°F SHALL BE .003 IN/IN.

△2 OVERSIZE MASTER OF FIDUCIAL MARKS WILL BE REPRODUCED IN THE FINAL PART TO ASSURE THE ACCURACY OF THE ETCH AND DEPOSIT PROCESS AND THE REDUCTION RATIO BETWEEN MASK AND PART. THE NARROWEST PARALLEL WHITE SPACE SHOULD APPEAR BETWEEN THE SUPERIMPOSED FIDUCIAL MARKS. THE FIDUCIAL MARKS SHALL BE PART OF THE ORIGINAL ART WORK & SHALL BE HELD TO LINE SCRIBING TOLERANCES.

△3 A STEP-WISE APPROXIMATION TO THE SMOOTH CURVE IS ACCEPTABLE PROVIDED THAT NO LESS THAN 800 EQUAL STEPS PER CYCLE ARE USED



10002405 A

ITEM	ZONE	REF. SYM	REQD	PART NUMBER	DESCRIPTION	MATERIAL OR NOTE	MATL SPEC OR NOTE	STOCK SIZE OR NOTE

LIST OF MATERIAL

UNLESS OTHERWISE SPECIFIED	
[redacted]	
ALL DIMENSIONS ARE TO BE HELD AFTER PLATING	
DIMENSIONS ARE IN INCHES	
TOLERANCES ON	
DECIMALS: X ± .1, XX ± .02, XXX ± .010	FRACTIONS ± 1/2, ANGLES ± 0° 30'

10002405 | REV A | SHT 2 OF 3
NEXT ASSY | USED ON

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